AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims:

1. (Currently Amended) A method of cementing in a subterranean formation comprising:

providing a cement composition comprising a hydraulic cement and a degradable material, wherein the degradable material is selected from the group consisting of aliphatic polyesters, poly(lactides), poly(glycolides), poly(ε-caprolactones), poly(hydroxybutyrates), poly(anhydrides), aliphatic polycarbonate, ortho esters, poly(orthoesters), poly(vinylacetates), polyamides, proteins, polyaminoacids, nylons, poly(caprolactams), polylactic acid, cellulose acetate, and combinations thereof;

placing the cement composition into a subterranean formation;

allowing the cement composition to set therein to form at least a portion of a cement sheath; and

allowing the degradable material to degrade so as to create one or more voids within the cement sheath.

2. (Original) The method of claim 1 wherein the cement composition further comprises water, and wherein the water is present in the cement composition in an amount sufficient to form a pumpable slurry.

3. (Original) The method of claim 2 wherein the water is present in the cement composition in an amount in the range of from about 25% to about 150% by weight of the cement.

4. (Original) The method of claim 2 wherein the water is present in the cement composition in an amount in the range of from about 30% to about 75% by weight of the cement.

5. (Previously Presented) The method of claim 1 wherein the hydraulic cement is selected from the group consisting of Portland cements, pozzolanic cements, gypsum cements, high alumina content cements, phosphate cements, silica cements, and high alkalinity cements.

6. (Original) The method of claim 1 wherein the degradable material comprises a material that degrades at a desired time after contact with the cement composition.

7. (Original) The method of claim 1 wherein the degradable material comprises a material that prevents fluid loss into the subterranean formation.

8. (Previously Presented) The method of claim 1 wherein the degradable material degrades after the cement composition sets therein to form at least a portion of a cement sheath.

9. (Previously Presented) The method of claim 1 wherein the degradable material degrades before or while the cement composition sets therein to form at least a portion of a cement sheath.

10. (Original) The method of claim 1 wherein the degradable material, upon degradation, forms at least one gas, salt or combination thereof.

11. (Currently Amended) The method of claim 1 wherein the degradable material is selected from the group consisting of ~~an aliphatic polyester; a poly(lactide); a poly(glycolide); a poly(ε-caprolactone); a poly(hydroxybutyrate); a poly(anhydride); an aliphatic polycarbonate; an ortho ester; a poly(orthoester); a poly(vinylacetate); and a combination thereof~~ aliphatic polyesters, poly(lactides), poly(glycolides), poly(ε-caprolactones), poly(hydroxybutyrates), poly(anhydrides), aliphatic polycarbonate, ortho esters, poly(orthoesters), poly(vinylacetates), and combinations thereof.

12. (Original) The method of claim 1 wherein the degradable material comprises a polyamide.

13. (Currently Amended) The method of claim 1 wherein the degradable material is selected from the group consisting of ~~a protein; a polyaminoacid; a nylon; a poly(caprolactam); and a combination thereof~~ proteins, polyaminoacids, nylons, poly(caprolactams), and combinations thereof.

14. (Previously Presented) The method of claim 1, wherein the degradable material is selected from the group consisting of polylactic acid, cellulose acetate, and a combination thereof.

15. (Currently Amended) The method of claim 1 wherein the cement composition further comprises an additive selected from the group consisting of~~: a fluid loss control additive, a defoamer, a dispersing agent, a set accelerator, a salt, a formation conditioning agent, a weighting agent, a set retarder, a hollow glass or ceramic bead, an elastomer, and a combination thereof~~ fluid loss control additives, defoamers, dispersing agents, set accelerators, salts, formation conditioning agents, weighting agents, set retarders, glass beads, ceramic beads, elastomers, and combinations thereof.

16. (Original) The method of claim 1 wherein the degradable material comprises particles in the form of a thin film, a flake, a substantially spherical particle, a bead, a fiber, or a combination thereof.

17. (Original) The method of claim 1 wherein the degradable material is present in the cement composition in an amount sufficient to leave voids in the cement composition that enhance the mechanical properties of the cement composition.

18. (Previously Presented) The method of claim 17 wherein the properties that are enhanced include the elasticity, resiliency, and/or ductility of the portion of the set cement sheath.

19. (Original) The method of claim 1 wherein the degradable material is present in the cement composition in an amount in the range of from about 1% to about 25% by weight of cement.

20. (Original) The method of claim 1 wherein the degradable material is present in the cement composition in an amount in the range of from about 5% to about 15% by weight of cement.

21. (Original) The method of claim 1 wherein the cement composition further comprises a polymer emulsion.

22. (Original) The method of claim 21, wherein the polymer emulsion is present in the cement composition in an amount in the range of from about 5% to about 100% by weight of an amount of water in the cement composition.

23. (Original) The method of claim 21 wherein the polymer emulsion comprises a polar monomer and at least one elasticity-enhancing monomer.

24. (Currently Amended) The method of claim 23 wherein the polar monomer is selected from the group consisting of[[:]] vinylamine, vinyl acetate, acrylonitrile, and the acid, ester, amide, and salt forms of acrylates.

25. (Currently Amended) The method of claim 23 wherein the at least one elasticity-enhancing monomer is selected from the group consisting of[[:]] ethylene, propylene, butadiene, 1,3-hexadiene, and isoprene.

26. (Original) The method of claim 23 wherein the polar monomer is present in the polymer emulsion in an amount in the range of from about 1% to about 90% by weight of the polymer emulsion.

27. (Original) The method of claim 23 wherein the at least one elasticity-enhancing monomer is present in the polymer emulsion in an amount in the range of from about 10% to about 99% by weight of the polymer emulsion.

28. (Original) The method of claim 23 wherein the polymer emulsion further comprises a stiffness-enhancing monomer.

29. (Currently Amended) The method of claim 25 wherein the stiffness-enhancing monomer is selected from the group consisting of[[:]] styrene, t-butylstyrene, α-methylstyrene, and sulfonated styrene.

30. (Original) The method of claim 28 wherein the stiffness-enhancing monomer is present in the polymer emulsion in an amount in the range of from about 0.01% to about 70% by weight of the polymer emulsion.

31. (Original) The method of claim 21 wherein the polymer emulsion comprises an aqueous styrene butadiene latex.

32. (Original) The method of claim 21 wherein the cement composition further comprises a surfactant.

33. (Original) The method of claim 32 wherein the surfactant comprises a nonionic ethoxylated nonylphenol.

34. (Original) The method of claim 32 wherein the surfactant is present in the cement composition in an amount in the range of from about 10% to about 20% by weight of the polymer emulsion.

35. (Original) The method of claim 1 wherein the cement composition comprises a gas.

36. (Original) The method of claim 35 wherein the gas is nitrogen.

37. (Original) The method of claim 36 wherein the gas is present in the cement composition in an amount sufficient to provide a gas concentration in the range of from about 0.5% to about 30% by volume of the cement composition, measured when the cement composition has been placed in the subterranean formation.

38. (Original) The method of claim 1 wherein the cement composition comprises a gas-generating additive.

39. (Currently Amended) The method of claim 38 wherein the gas-generating additive ~~comprises an~~ is selected from the group consisting of aluminum powder ~~or~~ and azodicarbonamide.

40. (Original) The method of claim 38 wherein the gas-generating additive is capable of generating hydrogen or nitrogen *in situ*.

41. (Original) The method of claim 38 wherein the gas-generating additive is present in the cement composition in an amount in the range of from about 0.1% to about 5% by weight of the cement.

42. (Original) The method of claim 39 wherein the aluminum powder is present in the cement composition in an amount in the range of from about 0.1% to about 1% by weight of the cement.

43. (Original) The method of claim 39 wherein the azodicarbonamide is present in the cement composition in an amount in the range of from about 0.5% to about 5% by weight of the cement.

44. (Original) The method of claim 1 wherein the subterranean formation comprises a multilateral well.

45. (Original) The method of claim 1 wherein the subterranean formation comprises a well bore that comprises an expandable tubular.

46. (Original) The method of claim 1, wherein the cement is a Portland cement; wherein the degradable material is polylactic acid, wherein the polylactic acid is present in the cement composition in an amount in the range of about 1% to about 25% by weight of the cement; wherein the cement composition further comprises water, and wherein the water is present in the cement composition in an amount in the range of from about 25% to about 150% by weight of the cement.

47-126. (Cancelled)